



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,485	05/09/2004	WEI LU		3484
43447	7590	10/10/2007	EXAMINER	
WEI LU 1218 BUBB RD CUPERTINO, CA 95014			FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2617	
			MAIL DATE	DELIVERY MODE
			10/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/709,485	LU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Bryan J. Fox	2617	

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 July 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 and 21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application                         |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ .  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushnell et al (US007058415B2) in view of Wee et al (US 20030220074A1) and further in view of Lockhart (US006173189B1).

Regarding claim 1, Bushnell et al disclose a dual mode telephone station set with one Directory Number (see column 4, line 59 – column 5, line 55), which reads on the claimed, “wireless communication terminal device supporting various different wireless air interfaces in the same device with same unique identifier based on open Air-Interface BIOS signal processing architecture and capable of communicating with other devices, systems or networks through said open Air-Interfaces.” The cordless base station (see column 5, line 57 – column 6, line 24) reads on the claimed, “open computer system equipped with full networking facilities to access various different backbone networks either through wireline networking interfaces or through broadband wireless communication systems of said open Air-Interfaces,” and, “said base transceiver system connecting to said computer system wirelinely to construct the open base-station as a whole.” The dual mode telephone operates as a cellular telephone or a cordless telephone (see column 4, line 59 – column 5, line 11), which reads on the

claimed, "said wireless terminal device connecting to different wireline network through its wireline Network Interface Unit in said wireless terminal device." Bushnell et al fail to expressly disclose said base-station can connected to other base station or said wireless terminal can also connected to other wireless terminal in an ad-hoc mode.

In a similar field of endeavor, Wee et al disclose a portable wireless system that may be configured to operate as a third party wireless repeater (see paragraph 31).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above configuration as a wireless repeater in order to increase the utilization of existing wireless network infrastructures by making one or more unused wireless channels available to other devices as suggested by Wee et al (see paragraph 27). The combination reads on the claimed, "said base station connecting to other said base station either over the wireline networks or over broadband wireless access system through said computer system, or through said base transceiver system of said open Air-Interfaces in an ad-hoc mode, and said wireless terminal device connecting directly to other said wireless terminal device through said open Air-Interfaces in an ad-hoc mode." The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air

protocols (see column 4, lines 52-61), which reads on the claimed, "open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18).

Regarding claim 2, Bushnell et al disclose a dual mode handset (see column 4, line 59 – column 5, line 55), which reads on the claimed, "open processing engine processing the signals and protocols of said open Air-Interfaces." The mobile phone communicates wirelessly with a base station (see column 4, line 59 – column 5, line 11), which reads on the claimed, "reconfigurable and open digital converter transforming the received analog signals to the digital base-band signals and vice versa, and connecting to said open processing engine," wherein wireless communication necessitates a digital converter. The mobile phone may communicate via a cordless base station or a cellular mode (see column 4, line 59 – column 5, line 55), which reads on the claimed, "programmable and open radio frequency (RF) module and smart antenna processing module of different frequencies supporting said open air-interfaces, and connecting signal processing to said digital converter," and, "an open wireless BIOS (basic input/output system) signal processing architecture capable of providing the common and open interfaces to said processing engine, said digital converter...and mapping

said open air interfaces into different interface parameters of said signal processing architecture.” Bushnell et al fail to disclose a software definable module (SDM) containing processing parameters, algorithms and protocols of some wireless air-interfaces to be stored in an external memory card or downloaded from networks.

In a similar field of endeavor, Wee et al disclose a controller 102 that configures portable wireless system 10 to relay wireless signals between a third party electronic appliance and a wireless network that may be implemented in a separate module (e.g. a PC card, such as a PCMCIA card) that plugs into a legacy portable wireless device (see paragraph 33), which reads on the claimed, “software definable module (SDM) containing processing parameters, algorithms and protocols of said open air-interfaces to be stored in an internal memory, external memory card or downloaded from networks.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above separate module in order to provide backward compatibility. The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air protocols (see column 4, lines 52-61), which reads on the claimed, “open base transceiver system supporting various different air interfaces based on said open Air-

Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18).

Regarding claim 3, the combination of Bushnell et al, Wee et al and Lockhart discloses the dual mode telephone station is programmed to operate as a cordless telephone when in proximity of the cordless base station and operates as a cellular telephone when it is out of reach of the cordless base station (see Bushnell et al column 4, lines 59-64), which reads on the claimed, "open system software module based on said open wireless BIOS signal processing architecture, supporting dynamic spectrum management, spectrum sharing and open resource management to increase spectrum efficiency and optimize the system performance and wireless transmission performance." When the dual mode telephone station set is in range of the cordless base station, the dual mode handset originated calls are routed through the local wireline system and when the dual mode telephone station set is not in proximity to the cordless base station, the dual mode telephone station set registers with the cellular service provider (see Bushnell et al column 5, lines 30-55), which reads on the claimed, "open convergence layer module converging wireline and wireless networks and services, as well as transmission convergence of said open air-interfaces." The transition between the cordless base station and the cellular system (see Bushnell et al

column 5, lines 30-55) reads on the claimed, “open configuration management module enabling flexible system re-configuration when said open air-interfaces changing, wireline networking changing or system setting changing.” The subscriber authentication (see Bushnell et al column 3, lines 39-64) reads on the claimed, “open security model for the enhanced security management of the system.”

Regarding claim 4, the combination of Bushnell, Wee et al and Lockhart discloses the programming of the dual mode telephone station (see Bushnell et al column 4, lines 59-64) reads on the claimed, “said wireless terminal device comprising system software, application software and real-time OS running upon the system hardware through said open wireless BIOS signal processing architecture.”

Regarding claim 5, the combination of Bushnell et al, Wee et al and Lockhart discloses the operation of the dual mode telephone station set with the cordless base station and the cellular system (see column 4, line 59 – column 5, line 55), which reads on the claimed, “said open processing engine decodes, de-channelizes and demodulates the open base-band channel signals and control signals of said open air-interfaces into detailed digital signaling, traffic and control information based on said open wireless BIOS signal processing architecture.”

Regarding claim 6, Bushnell et al fails to disclose said base station can be reconfigured and re-programmed as wireless router.

In a similar field of endeavor, Wee et al disclose a portable wireless system that may be configured to operate as a third party wireless repeater (see paragraph 31), which reads on the claimed, “said base station can be reconfigured and re-programmed

as wireless router by integrating said interface parameters through said open wireless BIOS signal processing architecture."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above configuration as a wireless repeater in order to increase the utilization of existing wireless network infrastructures by making one or more unused wireless channels available to other devices as suggested by Wee et al (see paragraph 27). The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air protocols (see column 4, lines 52-61), which reads on the claimed, "open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18).

Regarding claim 7, Bushnell et al fails to disclose said base station can be reconfigured to be portable and/or mobile as well for military applications or special industrial applications.

In a similar field of endeavor, Wee et al disclose a portable wireless system that may be configured to operate as a third party wireless repeater (see paragraph 31), which reads on the claimed, "said base station can be reconfigured to be a mobile base station that said computer system connecting to said backbone networks through said broadband wireless communication systems instead of said wireline networking interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above configuration as a wireless repeater in order to increase the utilization of existing wireless network infrastructures by making one or more unused wireless channels available to other devices as suggested by Wee et al (see paragraph 27). The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air protocols (see column 4, lines 52-61), which reads on the claimed, "open base transceiver system supporting various different air interfaces based on said open Air-

Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18).

Regarding claim 8, the combination of Bushnell et al, Wee et al and Lockhart discloses the use of CDMA (see Bushnell et al column 3, line 65 – column 4, line 27), which reads on the claimed, "said wireless terminal device and said base station can communicate each other over said open different air interfaces based on said open wireless BIOS signal processing architecture."

Regarding claim 9, the combination of Bushnell et al, Wee et al and Lockhart discloses the dual mode telephone station is programmed to operate as a cordless telephone when in proximity of the cordless base station and operates as a cellular telephone when it is out of reach of the cordless base station (see Bushnell et al column 4, lines 59-64), which reads on the claimed, "performing initial channel processing from the received signals based on said interface parameters of said open wireless BIOS signal processing architecture, scanning frequency carrier from the received signals of said open air interfaces, performing different decoding scheme from the received signals of said open air interfaces, performing different demodulation scheme from the received signals of said open air-interfaces, and calculating radio link parameters and models of said open wireless BIOS signal processing architecture."

Regarding claim 10, the combination of Bushnell et al, Wee et al and Lockhart discloses the dual mode telephone station is programmed to operate as a cordless telephone when in proximity of the cordless base station and operates as a cellular telephone when it is out of reach of the cordless base station (see Bushnell et al column 4, lines 59-64), which reads on the claimed, "open operating systems supporting said open air-interface, open resource management including spectrum, bandwidth, channels, capacity, processors, power, storage and services based on said open wireless BIOS signal processing architecture, common objects library and functional components defining the converged processing elements and open interface parameters of said open wireless BIOS signal processing architecture, open configuration management including system reconfiguration in base-band parts, RF parts, antenna parts, network parts and service parts."

Regarding claim 11, the combination of Bushnell et al and Wee et al discloses the dual mode telephone station is programmed to operate as a cordless telephone when in proximity of the cordless base station and operates as a cellular telephone when it is out of reach of the cordless base station (see Bushnell et al column 4, lines 59-64), which reads on the claimed, "said open wireless BIOS signal processing architecture further defining the basic interface structure for said open air-interfaces, said open air-interfaces switching, said open system modules as well as switching between internal and external open modules of said open air-interfaces."

Regarding claim 13, Bushnell et al fail to disclose a software definable module of said open air-interfaces in said wireless terminal device can be stored in or installed

from said external memory card, or downloaded through said network interface unit of said wireless terminal device.

In a similar field of endeavor, Wee et al disclose a controller 102 that configures portable wireless system 10 to relay wireless signals between a third party electronic appliance and a wireless network that may be implemented in a separate module (e.g. a PC card, such as a PCMCIA card) that plugs into a legacy portable wireless device (see paragraph 33), which reads on the claimed, "software definable module in said wireless terminal device can be stored in or installed from said external memory card (or SIM card), or downloaded from any available networking facilities of said wireless terminal device based on said open wireless BIOS signal processing architecture."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above separate module in order to provide backward compatibility. The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air protocols (see column 4, lines 52-61), which reads on the claimed, "open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS signal processing architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18).

Regarding claim 14, the combination of Bushnell et al and Wee et al discloses the dual mode telephone station is programmed to operate as a cordless telephone when in proximity of the cordless base station and operates as a cellular telephone when it is out of reach of the cordless base station (see Bushnell et al column 4, lines 59-64), which reads on the claimed, "open service convergence including service-oriented mobility infrastructure across both wireline and wireless networks," and, "open transmission convergence including adaptive modulation, adaptive coding and adaptive equalization of said open air-interfaces based on said open wireless BIOS signal processing architecture."

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bushnell et al in view of Wee et al and Lockhart as applied to claim 2 above, and further in view of Guo (US 20020187813A1).

Regarding claim 12, the combination of Bushnell et al, Wee et al and Lockhart fails to disclose the use of antenna arrays.

In a similar field of endeavor, Guo discloses beamforming antenna arrays (see paragraph 42), which reads on the claimed, "using antenna arrays to process radio signals...in both space and time to improve performance in presence of wireless fading

and interference, using interference mitigation method to maximally reuse the channel frequencies and share the spectrum...and using spatial multiplexing algorithms to increase data speeds."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al, Wee et al and Lockhart with Guo to include the above use of beamforming antenna arrays in order to reduce initial deployment costs of a wireless network as suggested by Guo (see paragraph 2).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bushnell et al in view of Wee et al and Lockhart as applied to claim 3 above, and further in view of what was well-known in the art (see MPEP 2144.03)

Regarding claim 21, Bushnell et al disclose a dual mode telephone station set with one Directory Number (see column 4, line 59 – column 5, line 55), which reads on the claimed, "software detecting available wireless networks of said open air interfaces in the service geographic area, software configuring the detected said wireless networks and installing the required modules of said open air interfaces with said open wireless BIOS architecture, software providing the information input methods for said wireless terminal device," and, "software providing connection methods for said wireless terminal device including traditional mobile networks...broadcasting or user-defined topology, software defining user-preferred service mode based on quality of service, bandwidth, traffic model, billing model and application model." The subscriber authentication (see column 3, lines 40-64) reads on the claimed, "software providing enhanced security

solutions for said wireless terminal device," and, "software providing safety solutions for said wireless terminal device." The support of CDMA (see Bushnell et al column 4, lines 3-27) reads on the claimed "software supporting open spectrum management methods including spectrum sharing, spectrum recycling and multiple spectrum ownership, software providing optimized power management solutions to minimize said wireless terminal device power consumption including base-band processing, radio frequency modules, controllers as well as applications." Bushnell et al fail to expressly disclose ad-hoc.

In a similar field of endeavor, Wee et al disclose a portable wireless system that may be configured to operate as a third party wireless repeater (see paragraph 31).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bushnell et al with Wee et al to include the above configuration as a wireless repeater in order to increase the utilization of existing wireless network infrastructures by making one or more unused wireless channels available to other devices as suggested by Wee et al (see paragraph 27). The combination reads on the claimed, "said base station connecting to other said base station either over the wireline networks or over broadband wireless access system through said computer system, or through said base transceiver system of said open Air-Interfaces in an ad-hoc mode, and said wireless terminal device connecting directly to other said wireless terminal device through said open Air-Interfaces in an ad-hoc mode." The combination of Bushnell et al and Wee fails to disclose an open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to

interconnect said wireless communication terminal device through said open Air-Interfaces.

In a similar field of endeavor, Lockhart discloses a base station in a radio communication system capable of receiving reverse channel data using two over the air protocols (see column 4, lines 52-61), which reads on the claimed, "open base transceiver system supporting various different air interfaces based on said open Air-Interface BIOS architecture to interconnect said wireless communication terminal device through said open Air-Interfaces."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al and Wee et al with Lockhart to include the above multimode base station in order to share channels or equipment efficiently as suggested by Lockhart (see column 1, lines 13-18). The combination of Bushnell et al, Wee et al and Lockhart fails to disclose Voice-over IP.

The Examiner takes official notice that Voice-over-IP capability was well known in the art at the time of the invention.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Bushnell et al, Wee et al and Lockhart to include the above use of peripherals in order to extend the capabilities of the device.

#### ***Response to Arguments***

Applicant's arguments filed July 10, 2007 have been fully considered but they are not persuasive.

The Examiner has noted many arguments made by the Applicant include a narrower interpretation of a claimed limitation than the Examiner has given the limitation. While claimed limitations are read in light of the specification, limitations from the specification may not be read into the claims. This means that even though a limitation may be described in the specification to have a certain interpretation, the Examiner may interpret the limitation differently, depending on how the limitation is claimed.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., where the various wireless standards are mapped into open interface parameters for the BIOS based signal processing method, IEEE802.16 standards or microwave radio standards) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicant argues Bushnell et al never teach or suggest supporting multiple wireless standards based on the open air interface BIOS signal processing architecture. The Examiner respectfully disagrees. Bushnell et al disclose a dual mode telephone station set with one Directory Number (see column 4, line 59 – column 5, line 55), which fulfills the limitation of a wireless communication terminal device supporting multiple wireless standards based on the open air interface BIOS signal processing architecture.

The Applicant argues Bushnell does not teach or suggest a computer system or base station to access various different backbone networks through broadband wireless

communication systems of said open air-interfaces. The Examiner respectfully disagrees. The cordless base station connects to POTS and also to the terminal 305 via Bluetooth (see figure 1) fulfilling the claimed limitations.

The Applicant argues Bushnell does not disclose the terminal connecting directly to a wireline network. The connection to POTS via the cordless base station (see figure 1) is read to fulfill the limitation of "said wireless terminal device connecting to different wireline networks through its wireline network interface unit in said wireless terminal device."

The Applicant argues the repeater in Wee may not function as a base station. The Examiner respectfully disagrees and points out it is the combination of Bushnell and Wee applied against the claimed limitations. Further, the repeater disclosed by Wee reads on the broadest reasonable interpretation in light of the specification of the claimed "base station."

The Applicant argues Lockhart fails to disclose supporting multiple wireless standards, both in the forward and reverse channels, based on the open air interface BIOS signal processing architecture where the various wireless standards are mapped into open interface parameters for the BIOS based signal processing method. This limitation is not what the Applicant has claimed. The Examiner maintains Lockhart reads on the broadest reasonable interpretation of the claimed material in light of the specification.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bryan Fox  
October 1, 2007



CHARLES N. APPIAH  
SUPERVISORY PATENT EXAMINER